

What is Claimed is:

1 1. In a processing system having an unprotected
2 pipeline, an apparatus comprising:

3 a first logic gate for providing a first signal when a
4 control signal is applied thereto; and

5 a second logic gate for providing a halt signal when
6 said first signal is applied to a first input terminal of
7 the second logic gate and a halt request signal is applied
8 to a second input terminal of the second logic gate.

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10 2. The apparatus as recited in claim 1 further
11 comprising a storage unit, wherein the storage unit stores
12 the control signal.

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14 3. The apparatus as recited in claim 2 wherein an
15 interruptible code portion signal applied to a second
16 terminal of the first logic gate, the interruptible code
17 portion signal applied to the second terminal resulting in
18 the generation of the first signal.

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20 4. The apparatus as recited in claim 3 wherein the
21 halt signal is generated by the second logic gate when the
22 processor is executing a non-interruptible code portion and
23 the control signal is stored in the storage unit.

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1 5. The apparatus as recited in claim 4 wherein the
2 first logic gate is a logic OR gate and the second logic
3 gate is a logic AND gate.

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5 6. A method for providing a halt request signal
6 during the execution of a non-interruptible code portion in
7 a processor having a non-protected pipeline; the method
8 comprising:

9 when an interruptible code portion is executing,
10 generating a halt signal in response to halt request
11 signal; and

12 when a control signal is present, generating a halt
13 signal in response to a halt request signal.

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15 7. The method as recited in claim 6 wherein, when
16 the control signal is present, generating a halt signal
17 when the code is executing in an interruptible mode and
18 when the code is executing in a non-interruptible mode.

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20 8. The method as recited in claim 7 wherein the
21 control signal is stored in a storage unit by a user.

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23 9. A data processing unit comprising:

24 a processor, the processor including:

25 a non-protected pipeline,

26 the processor executing interruptible code and
27 non-interruptible code;

1 a storage unit for storing a control bit;
2 a logic unit responsive to the control bit for
3 generating a halt signal in response to a halt request
4 signal and the control bit, the logic unit generating a
5 halt signal in response to a halt request signal during
6 execution of an interruptible code portion when the control
7 bit is not stored in the storage unit.

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9 10. The processing unit as recited in claim 9 wherein
10 the processor further includes;

11 a first logic gate coupled to the storage unit, the
12 logic gate generating a first signal in response to the
13 control bit in the storage unit, the first logic gate
14 generating a first signal when the processor is executing a
15 interruptible code portion; and

16 a second logic gate coupled to the first logic gate,
17 the second logic gate generating a halt signal in response
18 to a halt request signal and the first signal.